

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB2004/004305

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K41/00 A61K47/48

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, CHEM ABS Data, EMBASE, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/44395 A (THE NORWEGIAN RADIUM HOSPITAL RESEARCH FOUNDATION; JONES, ELIZABETH, L) 6 June 2002 (2002-06-06) page 21, line 1 page 11, line 35 - page 12, line 10 page 20, lines 20-25 page 24, lines 4-26 page 34, lines 16-25; claims 18,19 ----- -/--	1,3,4,8, 11,12,23

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

14 June 2005

Date of mailing of the international search report

22 09. 2005

Name and mailing address of the ISA

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>CALDAS L-R ET AL: "ACTION ANTIVIRALE PAR EFFET PHOTODYNAMIQUE SUR DES SYSTEMES BACTERIENS: SENSIBILITE PARTICULIERE DES BACTERIES INFECTEES"</p> <p>COMPTES RENDUS HEBDOMADAIRES DES SEANCES DE L'ACADEMIE DES SCIENCES. SERIES D, SCIENCES NATURELLES, GAUTHIER-VILLARS, PARIS,, FR, no. 278,</p> <p>29 April 1974 (1974-04-29), pages 2369-2372, XP001052858</p> <p>ISSN: 0567-655X</p> <p>abstract; figures 1,2</p>	1-25
Y	<p>MENEZES S. ET AL: "Photodynamic action of methylene blue: repair and mutation in Escherichia coli"</p> <p>JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY, B. BIOLOGY,</p> <p>vol. 5, 1990, pages 505-517, XP008048287</p> <p>page 514, paragraph 2; figure 5</p>	1-25
Y	<p>WO 99/26476 A (CERUS CORPORATION)</p> <p>3 June 1999 (1999-06-03)</p> <p>page 20, lines 36-38; claim 14</p> <p>page 23, line 21 - page 24, line 4</p>	1-25
Y	<p>EMBLETON M. L. ET AL: "Selective lethal photosensitization of methicillin-resistant Staphylococcus aureus using an IgG-tin(IV) chlorin e6 conjugate"</p> <p>JOURNAL OF ANTIMICROBIAL CHEMOTHERAPY,</p> <p>vol. 50, 2002, pages 857-864, XP008048237</p> <p>cited in the application</p> <p>abstract; figures 2-6</p> <p>see discussion</p>	1-25
A	<p>SZPAKOWSKA M. ET AL: "Photodynamic activity of the haematoporphyrin derivative with rutin and arginine substituents (HpD-Rut2-Arg2) against staphylococcus aureus and pseudomonas aeruginosa"</p> <p>PHARMACOLOGICAL RESEARCH,</p> <p>vol. 44, no. 3, 2001, pages 243-246, XP002331303</p> <p>see discussion</p> <p>abstract</p> <p>page 244, column 2</p>	1-25
Y	<p>WEBB R. B. ET AL: "Photodynamic effects of dyes on bacteria"</p> <p>MUTATION RESEARCH,</p> <p>vol. 59, 1979, pages 1-13, XP008048277</p> <p>abstract; figure 3; table 1</p>	13-25
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 03/063902 A (GAMBRO, INC) 7 August 2003 (2003-08-07) page 13, paragraph 4 - page 14, paragraph 1 page 30, paragraph 2; claim 1 page 12, paragraph 1 -----	1-25
A	ROSENKRANZ A A ET AL: "TARGETED INTRACELLULAR DELIVERY OF PHOTODYNSITIZERS TO ENHANCE PHOTODYNAMIC EFFICIENCY" IMMUNOLOGY AND CELL BIOLOGY, CARLTON, AU, vol. 78, no. 4, August 2000 (2000-08), pages 452-464, XP000982090 abstract; figure 2 page 460 -----	1-25
A	US 6 500 800 B1 (SOBOLEV ALEXANDER SERGEEVICH ET AL) 31 December 2002 (2002-12-31) claims 1,2,8,16,17; example 5 -----	1-25
T	EMBLETON M. L. ET AL: "Antibody-directed photodynamic therapy of methicillin-resistant Staphylococcus aureus" MICROBIAL DRUG RESISTANCE, vol. 10, no. 2, 2004, pages 92-97, XP008048242 abstract; figure 1 page 93, column 2 page 96, column 2 -----	1-25

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 28-30
because they relate to subject matter not required to be searched by this Authority, namely:
Although claims 13-23 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☒ Claims Nos.: 28-30
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-25

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 13-23 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box II.1

Claims Nos.: 28-30

Claims 28-30 do not define subject matter in terms of technical features (Art 6 PCT)

A claim should be understandable without reference to the description: "substantially as described in the examples" cannot be accepted under Art. 6 PCT and Rule 6.2(a).

Continuation of Box II.2

Claims Nos.: 28-30

Claims 28-30 do not define subject matter in terms of technical features (Art 6 PCT)

A claim should be understandable without reference to the description: "substantially as described in the examples" cannot be accepted under Art. 6 PCT and Rule 6.2(a).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-25

Composition comprising a conjugate of a photosensitiser and a bacteriophage. Use of the same for killing bacteria and the treatment of bacterial infections.

2. claims: 26,27

Use of a bacteriophage as a targeting agent in photodynamic therapy

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Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0244395	A	06-06-2002	AU 2210402 A	11-06-2002
			BR 0115794 A	25-02-2004
			CA 2430334 A1	06-06-2002
			CN 1484706 A	24-03-2004
			CZ 20031792 A3	15-10-2003
			EP 1339862 A1	03-09-2003
			HU 0402626 A2	29-03-2005
			JP 2004520020 T	08-07-2004
			PL 362795 A1	02-11-2004
			US 2004096425 A1	20-05-2004
WO 9926476	A	03-06-1999	AU 747842 B2	23-05-2002
			AU 1592999 A	15-06-1999
WO 03063902	A	07-08-2003	CA 2474448 A1	07-08-2003
			EP 1471940 A2	03-11-2004
			JP 2005519920 T	07-07-2005
US 6500800	B1	31-12-2002	AU 1739697 A	28-08-1997
			WO 9728822 A1	14-08-1997
			RU 2066552 C1	20-09-1996